

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-110180-1

Client Project/Site: Ponds and Process Tanks

For:

Central Wire (Techalloy)

6509 Olson Road

Union, Illinois 60180

Attn: Robert Johnson



Authorized for release by:

4/26/2016 5:15:11 PM

Sandie Fredrick, Project Manager II

(920)261-1660

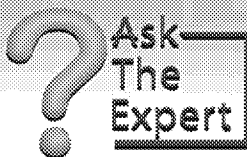
sandie.fredrick@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-110180-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-110180-1

Job ID: 500-110180-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-110180-1

Comments

No additional comments.

Receipt

The samples were received on 4/14/2016 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8° C.

Receipt Exceptions

2 of the 3 VOAs received were broken in shipment. Sufficient sample volume remains.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-110180-1

Client Sample ID: P&T Effluent

Date Collected: 04/13/16 11:00

Date Received: 04/14/16 10:20

Lab Sample ID: 500-110180-1

Matrix: Ground Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/16/16 12:13	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/16/16 12:13	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/16/16 12:13	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		71 - 127					04/16/16 12:13	1
4-Bromofluorobenzene (Surr)	109		71 - 120					04/16/16 12:13	1
Dibromofluoromethane	100		70 - 120					04/16/16 12:13	1
Toluene-d8 (Surr)	92		75 - 120					04/16/16 12:13	1

Client Sample ID: P&T pH

Date Collected: 04/13/16 11:00

Date Received: 04/14/16 10:20

Lab Sample ID: 500-110180-2

Matrix: Ground Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.03	HF	0.200	0.200	SU			04/14/16 15:33	1

Client Sample ID: North Pond

Date Collected: 04/13/16 10:45

Date Received: 04/14/16 10:20

Lab Sample ID: 500-110180-3

Matrix: Ground Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	79	J	100	26	ug/L		04/15/16 08:16	04/19/16 18:47	1
Lead	0.66		0.50	0.14	ug/L		04/15/16 08:16	04/19/16 18:47	1
Manganese	4.2		2.5	0.99	ug/L		04/15/16 08:16	04/19/16 18:47	1
Nickel	11		2.0	0.53	ug/L		04/15/16 08:16	04/19/16 18:47	1
Selenium	<0.83		2.5	0.83	ug/L		04/15/16 08:16	04/19/16 18:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate Nitrite	<0.045		0.10	0.045	mg/L			04/19/16 17:03	1
pH	8.39	HF	0.200	0.200	SU			04/14/16 15:44	1

Client Sample ID: South Pond

Date Collected: 04/13/16 10:50

Date Received: 04/14/16 10:20

Lab Sample ID: 500-110180-4

Matrix: Ground Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	42	J	100	26	ug/L		04/15/16 08:16	04/19/16 18:51	1
Lead	0.15	J	0.50	0.14	ug/L		04/15/16 08:16	04/19/16 18:51	1
Manganese	3.2		2.5	0.99	ug/L		04/15/16 08:16	04/19/16 18:51	1
Nickel	19		2.0	0.53	ug/L		04/15/16 08:16	04/19/16 18:51	1
Selenium	<0.83		2.5	0.83	ug/L		04/15/16 08:16	04/19/16 18:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate Nitrite	<0.045		0.10	0.045	mg/L			04/19/16 17:06	1
pH	7.79	HF	0.200	0.200	SU			04/14/16 15:56	1

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Client Sample Results

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-110180-1

Client Sample ID: Trip Blank

Lab Sample ID: 500-110180-5

Date Collected: 04/13/16 00:00

Matrix: Water

Date Received: 04/14/16 10:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			04/16/16 08:48	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			04/16/16 08:48	1
Trichloroethene	<0.16		0.50	0.16	ug/L			04/16/16 08:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		71 - 127					04/16/16 08:48	1
4-Bromofluorobenzene (Surr)	106		71 - 120					04/16/16 08:48	1
Dibromofluoromethane	100		70 - 120					04/16/16 08:48	1
Toluene-d8 (Surr)	93		75 - 120					04/16/16 08:48	1

Lab Chronicle

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-110180-1

Client Sample ID: P&T Effluent

Date Collected: 04/13/16 11:00

Date Received: 04/14/16 10:20

Lab Sample ID: 500-110180-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	331360	04/16/16 12:13	PMF	TAL CHI

Client Sample ID: P&T pH

Date Collected: 04/13/16 11:00

Date Received: 04/14/16 10:20

Lab Sample ID: 500-110180-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 H+ B		1	331129	04/14/16 15:33 (Start) 04/14/16 15:39 (End)	CCK	TAL CHI

Client Sample ID: North Pond

Date Collected: 04/13/16 10:45

Date Received: 04/14/16 10:20

Lab Sample ID: 500-110180-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			331215	04/15/16 08:16	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	331875	04/19/16 18:47	FXG	TAL CHI
Total/NA	Analysis	353.2		1	331821	04/19/16 17:03	HMW	TAL CHI
Total/NA	Analysis	SM 4500 H+ B		1	331129	04/14/16 15:44 (Start) 04/14/16 15:50 (End)	CCK	TAL CHI

Client Sample ID: South Pond

Date Collected: 04/13/16 10:50

Date Received: 04/14/16 10:20

Lab Sample ID: 500-110180-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			331215	04/15/16 08:16	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	331875	04/19/16 18:51	FXG	TAL CHI
Total/NA	Analysis	353.2		1	331821	04/19/16 17:06	HMW	TAL CHI
Total/NA	Analysis	SM 4500 H+ B		1	331129	04/14/16 15:56 (Start) 04/14/16 16:01 (End)	CCK	TAL CHI

Client Sample ID: Trip Blank

Date Collected: 04/13/16 00:00

Date Received: 04/14/16 10:20

Lab Sample ID: 500-110180-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	331360	04/16/16 08:48	PMF	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-110180-1

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



Certification Summary

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-110180-1

Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-17



Method Summary

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-110180-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
6020A	Metals (ICP/MS)	SW846	TAL CHI
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL CHI
SM 4500 H+ B	pH	SM	TAL CHI

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Central Wire (Techalloy)
Project/Site: Ponds and Process Tanks

TestAmerica Job ID: 500-110180-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-110180-1	P&T Effluent	Ground Water	04/13/16 11:00	04/14/16 10:20
500-110180-2	P&T pH	Ground Water	04/13/16 11:00	04/14/16 10:20
500-110180-3	North Pond	Ground Water	04/13/16 10:45	04/14/16 10:20
500-110180-4	South Pond	Ground Water	04/13/16 10:50	04/14/16 10:20
500-110180-5	Trip Blank	Water	04/13/16 00:00	04/14/16 10:20

Chicago

-2417 Bond Street


University Park, IL 60466
phone 708.534.5200 fax 708.534.5363

Chain of Custody Record, 1st & 2nd Month of Quarter

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Robert Johnson		Site Contact: Robert Johnson		Date: 4/13/16		COC No: 268709					
Central Wire Union Plant		Tel/Fax: 815.923.4919; 815.923.2126		Lab Contact:		Carrier: UPS		1 of 1 COCs					
6509 Olson Rd.		Analysis Turnaround Time						Job No.					
Union, IL 60180		Calendar (C) or Work Days (W)						500-110180					
(815) 923-2131 Phone		TAT if different from Below						SDG No.					
(815) 923-2126 Fax		<input checked="" type="checkbox"/> 2 weeks											
1st 2 mos. of qtr		<input type="checkbox"/> 1 week											
Union Plant		<input type="checkbox"/> 2 days											
P O #		<input type="checkbox"/> 1 day											
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (vials) 1, 2	Metals* (250 ml jars) 1, 4	N + N (500 ml vials) 1, 3	pH 1, 6	Sample Specific Notes:	
1 P&T Effluent	4/13	1100	G	GW	3	N	X					 500-110180 COC	
2 P&T pH		1100	G	GW	1	N			X				
3 North Pond		1045	G	GW	1	N	X						
3 North Pond		1045	G	GW	1	N		X					
3 North Pond		1045	G	GW	1	N			X				
4 South Pond		1050	G	GW	1	N	X						
4 South Pond		1050	G	GW	1	N		X					
1 South Pond		1050	G	GW	1	N			X				
5 Trip Blank						1							
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other													
Possible Hazard Identification							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>							<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Special Instructions/QC Requirements & Comments:													
North Pond Metals: Iron (Fe), Lead (Pb), Manganese (Mn), Nickel (Ni) & Selenium (Se) South Pond Metals: Iron (Fe), Lead (Pb), Manganese (Mn), Nickel (Ni) & Selenium (Se) Rec Center Metals: EPA Method 6020A & pH - no preservative													
Relinquished by: Bob Johnson		Company: CWI		Date/Time: 4/13 11:30		Received by: [Signature]		Company: CWI		Date/Time: 4/13/16 11:34		2.8	
Relinquished by: [Signature]		Company: CWI		Date/Time: 4/13 3:10		Received by: [Signature]		Company: UPS		Date/Time: 4-13-16 330		UPSGround	
Relinquished by: [Signature]		Company: TA-CWI		Date/Time: 04/14/16 10:20		Received by: [Signature]		Company: TA-CWI		Date/Time: 04/14/16 10:20			

Login Sample Receipt Checklist

Client: Central Wire (Techalloy)

Job Number: 500-110180-1

Login Number: 110180

List Source: TestAmerica Chicago

List Number: 1

Creator: Sanchez, Ariel M

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Sample - 1: 2 vials broken on arrival - sufficient sample remaining.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	